



## Celebrating 30 Years of Protecting the Environment A Timeline by Decade

### Kentucky Environmental Timeline State and National Events that Have Shaped Kentucky's Environment 1750-2002

Prepared by the Environmental Quality Commission  
In celebration of the EQC 30th Anniversary - 1972-2002

*Kentucky's environmental history centers around its wealth of natural and mineral resources. These resources have formed the basis of our communities and economy. However, past exploitation and abuses of these resources have caused environmental damage that still remains to be fully understood. This timeline seeks to preserve our environmental heritage so that future generations will better understand how far we have come in protecting our environment, but also how far we still have yet to go.*

#### **1750-1829 – Kentucky's Bountiful Resources**

- Settlement – People are drawn to Kentucky by the magnetism of the land and its basic resources – water, timber and minerals. News of Kentucky's bountiful resources is spread far and wide. By 1800, every section of the state, except the Cherokee reservation south of the Cumberland and Tennessee rivers, is settled.<sup>1</sup>
- Discovery of Kentucky's Raw Resources – Coal and oil production begins in West Kentucky. With the advent of the sawmill after 1810, lumbering in time becomes one of Kentucky's most persistent heavy industries.<sup>2</sup>

#### **1830-1889 –Pollution Problems Emerge**

- A Rural Farming Economy - The people of Kentucky are described as preeminently an agricultural people. The substantial patriarchal farmer forms the most influential part of the Commonwealth, according to David Dale Owen in the Second Kentucky Geological Survey of 1857.<sup>3</sup>
- Bad Water and Disease – Kentuckians rely on water from streams and springs for their drinking water supply with little regard to sanitation. Contaminated water leads to cholera outbreaks across the state killing thousands. Cholera was not linked to contaminated drinking water until the 1880s.
- Coal Mining Increases in West Kentucky – Coal production increases in Kentucky from 2,000 tons in 1830 to 100,000 tons in 1843. Coal mining and safety concerns lead to the creation of the Kentucky Department of Mines and Minerals and the United Mine Workers of America.

## **1890-1919 – Natural Resources Tapped and Exploited**

- Logging Strips Forests - In the post Civil War decades (1870-1920), rivers and creeks run full of logs rafted downstream to sawmills as thousands of acres of virgin forests are cleared.<sup>4</sup> Kentucky lumber production peaks in 1917. Kentuckians are also beginning to realize that their forest resources were not inexhaustible. Kentucky's first forest survey is conducted and its first state forester is appointed.
- Surface Mining Begins – New railroads to the Appalachian Highlands and the advent of surface mining techniques and equipment open up eastern Kentucky to coal mining. World War I increases demand for coal to 20.3 million tons. Increased coal mining leads the state to pass a new surface mining law. The state's worst mine disaster kills 62 miners in Clay, Kentucky.
- Wildlife Threatened – The first hunting license is issued in Kentucky in an effort to control rampant hunting of wildlife in Kentucky.

## **1920-1939 – Pollution Continues to Mount**

- Rivers as Sewers - The Ohio River is a virtual interstate sewer bearing wastes from Pittsburgh to Paducah. Cholera outbreak in Lexington kills 1,500 in 10 days. Kentucky's first wastewater treatment plant begins operation in Winchester.
- Flooding Brings Flood Control - Loggers, land developers, highway builders, miners and industrialists change much of the surface of Kentucky's land, stripping it of its forests and contributing to the state's worst flooding events. The era of flood control projects begins with the passage of the federal Flood Control Act. Construction of the Kentucky River dam begins. Kentucky also experiences its worst drought in history.
- Record Farms and Soil Erosion – A record number of farms (278,298) are operating in the state. But poor agricultural practices lead to severe erosion. The National Soil Erosion Service is formed after Congress declares soil erosion a “national menace.” A state law is passed to promote soil conservation practices such as strip cropping, crop rotation, contour plowing and cover crops.
- Increased Coal Mining Spur Actions – Coal mining in Kentucky continues to increase, doubling production in a 6-year period (1914 to 1920) to 42.1 million tons. Working conditions in the coal fields lead to the Harlan County Mine Wars.
- Conservation Movement Begins – Spawned by public concern about the exploitation of natural resources, the conservation movement begins in Kentucky. Kentucky creates its first state park and state wildlife management area. The state's only national forest – the Daniel Boone National Forest (originally the Cumberland National Forest) – is created.

## **1940-1959 –Industrial Expansion Creates New Pollution Concerns**

- Living Conditions Improve - Construction and expansion of the Rural Electric Cooperative extends electricity out into the state. Chlorination of public water supplies and wastewater treatment plant

construction grant program begins. The Kentucky Water Pollution Control Commission is created to address water pollution problems in Kentucky. By 1948, 70 wastewater treatment plants are in operation in Kentucky.

- **Wildlife and Forest Resources Fall Victim** – Past hunting reduces deer and wild turkey to a few thousand in Kentucky. The state wildlife agency initiates its first restocking program for deer. The chestnut blight wipes out this commercially important tree in Kentucky's forest.
- **Oil Drilling Pollutes Waterways**– Record oil production in Kentucky severely pollutes several waterways including the Green River, with salty brines produced during the drilling process.
- **Industrial Pollution Gains Attention** – The location of large chemical plants and other heavy industries in Louisville leads to the formation of the Jefferson County Air Pollution Control District to address air quality concerns. Paducah Gaseous Diffusion Plant begins operations it will become Kentucky's most extensive and costly contaminated waste site.

### **1960-1969 – Extent of Pollution Problems Revealed**

- **Surface Mining Reforms** – Coal mining continues to increase in Kentucky with production exceeding 100 million tons. Muhlenburg County becomes the nation's leading coal producer. Harry Caudill's book *Night Comes to the Cumberland* focuses attention on the environmental and social conditions in Appalachia coalfields. A drastic measure by Ollie Combs of lying down in front of a bulldozer to save her land from being mined results in statewide media attention. A stronger coal mining law is passed the next year in Kentucky with enforcement and reclamation provisions.
- **Citizens Empowered** – Through the passage of the Kentucky Civil Rights Act and the federal Freedom of Information Act, Kentuckians civil rights are secured and greater access to information is gained.
- **State Shifts Attention to Air Pollution** – Kentucky cities like Louisville, Ashland and Calvert City become home to large petrochemical, chemical and other heavy industries due to their proximity to transportation corridors and waterways. Kentucky begins regulating and monitoring air quality statewide for the first time.
- **Industrial Waste Threats Uncovered** – The discovery of the Valley of the Drums in Bullitt County with some 17,000 rusting drums of waste calls the nation's attention to the growing public health and environmental threats posed by industrial and chemical waste.

### **1970-1979 – An Era of Environmental Reform**

- **Sweeping National Environmental Laws Passed** – Pollution of air, land and waterways leads to a call for change and the nation's first Earth Day. Congress passes several key pieces of environmental legislation including the Safe Drinking Water Act, the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Surface Mining Control and Reclamation Act and the Endangered Species Act. The U.S. Environmental Protection Agency is created.

- **Environmental Programs Adopted in Kentucky** – Water, air and land pollution remain a concern in Kentucky. Some 72 percent of the state's waterways are impaired by pollution. Monitoring of air reveals pollution at unsafe levels in several cities in Kentucky. The state creates the Kentucky Environmental Quality Commission and the Natural Resources and Environmental Protection Cabinet. The cabinet assumes federal authority to carry out the provisions of the federal air and safe drinking water laws.
- **Dangers of Chemicals Revealed** – The nation moves to ban DDT and phaseout leaded gas after tests reveal they cause cancer. DDT is also associated with the near extinction of the national bird—the bald eagle. The bald eagle is listed as a federally endangered species. The U.S. EPA moves to ban one of the most toxic chemicals known—PCBs. In Kentucky, the state closes Maxey Flats, a low-level radioactive waste disposal site, after 14 years of operation when contamination is detected in groundwater.
- **Protection of Natural Resources Strengthened** – Kentucky initiates measures to protect its unique natural areas and pristine waterways. The creation of the Nature Preserves Commission and the Wild and Scenic Rivers program results in the protection of thousands of acres of natural areas and nine pristine river segments.
- **An End to Indiscriminate Flood Control** – Citizen protests force the governor to withdraw state support for a project to dam the Red River and flood the scenic gorge area. Flood control projects begin to be scrutinized more closely with few approved.

### **1980-1989 –A Legacy of Abuse Uncovered**

- **State Adopts Water Standards** – Kentucky moves forward in obtaining primacy to carry out a permitting program to control industrial and oil well discharges to waterways. Kentucky establishes a statewide ambient water monitoring network and also adopts its first state water quality standards.
- **Onsite Sewage Disposal Receives Attention** - A waterborne disease outbreak of Hepatitis-A in Meade County calls the state's attention to the safety of the wells and springs used by thousands of Kentuckians as a drinking water source. The Kentucky Department of Health assumes the job of permitting on-site sewage systems.
- **Dangers of industrial waste mount** - Waste sites are discovered across the state. Congress passes the federal Superfund law. Valley of the Drums in Bullitt County is listed as one of the nation's first Superfund sites. Another 10 sites in Kentucky, including Maxey Flats, are added to the federal Superfund list during this decade. Meanwhile, Kentucky establishes a hazardous waste permitting program and creates a state fund to cleanup waste sites.
- **Coal Mining Issues Remain** – The failure of a coal mining impoundment in Harlan County kills one and causes millions of dollars in damage. Shortly thereafter, Kentucky receives federal authority to carry out the federal surface mining law. After years of abuses, the 2-acre coal mine exemption is repealed leaving Kentucky with 700 sites in bond forfeiture. Environmental groups later challenge the Kentucky

surface mining program resulting in additional federal funding to step up enforcement activities. Voters in Kentucky amend the state constitution outlawing the Broad Form Deed, which gave corporate mineral rights precedence over individual owner surface rights. Kentucky also begins the task of reclaiming thousands of acres of abandoned mine lands with funds received from the federal Abandoned Mine Land program. Wyoming overtakes Kentucky as the leading coal producing state.

- **Toxic Chemicals a Growing Concern** – Thousands of new chemicals are registered for commercial use posing new health and environmental threats. The Toxic Release Inventory is created by Congress to require certain industries to report toxic chemical releases to the environment. Water testing leads to the state's first fish consumption advisories after toxic levels of PCBs are found in fish tissue in Town Branch. Fish consumption advisories are later issued for West Fork Drakes Creek and the Ohio River. State regulations are adopted to address leaking underground petroleum storage tanks.

- **Forest Fires** – Thousands of acres of forests are burned during the worst decade of forest fires on record in Kentucky. During this time 1.26 million acres of forestland burns. Arson is responsible for half of the wildfires occurring in Kentucky.

### **1990-1999 – Progress Continues**

- **Dumping Ground** – With landfill space dwindling in the eastern U.S., Kentucky is targeted as a dumping ground for hazardous and solid waste. Waste incinerators are proposed across the state. Trainloads of trash are hauled from New Jersey and New York to Kentucky's landfills. The governor issues a moratorium on incinerators and the General Assembly passes reforms to state solid waste laws. As a result, 45 of the existing 76 landfills close. Local governments step up efforts to promote garbage collection. New state laws and regulations are also passed to clean up huge tire piles. The PRIDE initiative (Personal Responsibility in a Desirable Environment) takes hold in eastern Kentucky to address surmounting waste and water quality issues in the region.

- **Biodiversity Recognized** – To better protect its unique natural areas the Kentucky Heritage Land Conservation Act is passed. The state also declares the University of Kentucky's Robinson Research Forest in Breathitt County unsuitable for mining. Biologists later discover Blanton Forest – an old-growth forest in Harlan County. The state passes a Rare Plant Recognition Act and Congress declares a 19-mile stretch of the Red River in the Daniel Boone National Forest a National Wild and Scenic River. Bald eagles make a comeback and elk are reintroduced in Kentucky. The governor creates the Biodiversity Council to promote research and conservation of Kentucky's natural resources.

- **Air Quality Improves, But Toxic Air Pollutants a Concern** – The federal Clean Air Act and its amendments of 1990 lead to a reduction of industrial emissions and improvement in air quality across Kentucky. But, the state still ranks second in the nation in the industrial releases of ozone destroying chemicals to the environment. The state begins tailpipe testing in northern Kentucky to control ozone air pollution in the region.

- **Extensive Logging of Forests** – The economic boom, coupled with growing timber supplies, result in

extensive logging of Kentucky's forests, reaching record levels at 1.1 billion board feet. The Kentucky Forest Conservation Act is passed to control run-off from logging operations and promote proper logging practices. A federal Forest Stewardship program is passed to help fund forest management practices but the cost-share program ends, leaving Kentucky with few resources to promote forest management.

- A New Controversial Farm Economy Emerges – The number of Kentucky farms drop to 91,000. Big production agriculture gains momentum in Kentucky. Large mega-hog operations are proposed. The state passes regulations to address the environmental impacts posed by large confined animal feeding operations (CAFOs). Poultry factory farms appear across the state, as broiler production in Kentucky reaches record levels at 188 million in 1999 up from 22 million in 1992.

## **2000-2002 – A New Millennium and New Challenges**

- Spills, Spills and More Spills – Kentucky begins the decade and new millennium with several major environmental incidents. They included the Marathon Ashland Petroleum pipeline rupture (\$7.1 million cleanup), the Norfolk railcar toxic chemical fire (leading to the evacuation of the city of Danville), and the Wild Turkey distillery fire resulting in the largest fish kill in state history. Kentucky also witnessed the largest coal slurry spill in the history of the southeastern United States. The Martin County Coal slurry impaired 107 miles of waterways and impacted the drinking water supplies of 30,000 Kentuckians. The spill calls attention to the safety of hundreds of coal waste impoundments across the state.

- Energy Crisis Hits Kentucky – While the nation sees natural gas and energy prices escalate, Kentucky becomes a popular state to site new power plants. Some 29 new plants are proposed, most of which will export energy out of state. The governor issues a moratorium on power plant permitting and new state merchant power plant laws are debated.

- Urban Sprawl – The loss of farmland and urban sprawl emerges as a critical economic and environmental concern across the state. The governor creates a Smart Growth Task Force and supports incentives to encourage sustainable development.

- Natural Resources Once Again Threatened – Kentuckians rally in opposition to proposals to mine Black Mountain and near the Pine Mountain Settlement School. The Southern pine beetle ravages Kentucky's forests, killing hundreds of acres of pine trees. The Big Sandy River is declared one of the nations most endangered rivers. A fish consumption advisory is issued for all Kentucky waterways after unsafe levels of mercury are detected in fish.

## **Footnotes**

1. History of Kentucky, Thomas D. Clark, 1960.
2. Ibid.
3. Ibid.
4. Ibid.